



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,390	02/12/2001	Howard E. Rhodes	M4065.0111/P111-A	9416

24998 7590 10/31/2003

DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
2101 L STREET NW
WASHINGTON, DC 20037-1526

EXAMINER

MALSAWMA, LALRINFAMKIM HMAR

ART UNIT	PAPER NUMBER
----------	--------------

2825

DATE MAILED: 10/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/780,390

Applicant(s)

RHODES ET AL.

Examiner

Lex Malsawma

Art Unit

2825

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:


Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-7 and 9-87.

Claim(s) withdrawn from consideration: _____

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☒ Other: see attached remarks


MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Remarks

1. In response to Applicant's request regarding clarification of the status of the drawings filed on 16 April 2001, the drawings are accepted by the Examiner.
2. Applicant's remarks/arguments have been carefully reviewed and considered, but they are not persuasive for the following reasons. In general, Applicant asserts that the combination of Chang and Yiannoulos does not teach or suggest the claimed invention, especially because Claim 1 requires a third doped region to be formed in the second doped active layer beneath the isolation region. It is noted that Chang specifies (in Col. 3, lines 8-10) that substrate 200 can be the P-well of an N-type substrate, and in such a case, the P-well "200" would be equivalent to the second doped active layer of Claim 1; therefore, incorporating a third doped region as shown/thought by Yiannoulos would obviously result in the third doped region being formed in said second doped active layer (P-well "200") beneath the isolation region 204. In other words, forming Chang's device by using typical CMOS technology would result in a "third" doped region located directly underneath the isolation region 204, wherein the "third" doped region is also located within the P-well "200" of an N-type substrate (note again, Chang's Fig. 2C and Col. 3, lines 8-10). Accordingly, Chang in view of Yiannoulos, at very least, suggests the invention of Claim 1; and since Applicant's remarks/arguments in reference to the limitations of the remaining claims are similar to those applied to Claim 1, all pending claims stand rejected.

In summary, the current invention is held obvious over the cited references primarily because Chang discloses a very important aspect of the currently claimed invention, and the modification(s) to Chang, necessary to arrive at the current invention, generally requires only that one implement typical CMOS technology when forming the device, i.e., Chang discloses a

Art Unit: 2825

photodiode with low junction leakage wherein the low junction leakage is attained by forming the first doped active region 210 spaced apart from the isolation region 104; and if one utilizes typical CMOS technology (as shown by Yiannoulos) when forming Chang's device, a "third" doped region would be formed/located in the second doped photoactive layer (P-well "200") directly underneath the isolation region 204.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lex Malsawma whose telephone number is 703-306-5986. The examiner can normally be reached on Monday-Thursday and Saturday 1 PM - 9:30 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 703-308-1323. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Lex Malsawma



October 28, 2003



MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800